



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,257	11/25/2003	Takayuki Wagu	02410283US	4101
7055	7590	08/03/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			SCHWARTZ, CHRISTOPHER P	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/720,257

Applicant(s)

WAGU ET AL.

Examiner

Christopher P. Schwartz

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

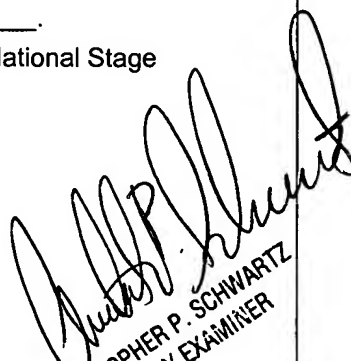
- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-515)
- 6) ☐ Other: _____.


CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

1. Applicant's response filed 5/31/06 has been received and considered. Claims 1-23 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3,8,11-17,19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alaze et al. '442 in view of WO 95/19282 and Buschmann et al.

Regarding claim 1 Alaze et al. discloses in figures 1 and 2 a brake fluid maintaining apparatus for a vehicle having, as broadly claimed, a master cylinder 11,12, a check valve, 18,53, a normally open electromagnetic valve 24 which is closable, and a

Art Unit: 3683

coil 56 responsive to an electric current. As broadly claimed, and subject to the 112 above, the added limitation to claim 1 is considered to be met.

Although it is presumed the valve of Alaze et al. is capable of operating in the claimed manner—that is during the pressure maintaining and no-maintaining states and the relief function via valve 21, Alaze et al. lacks a specific description of these features.

The reference to Buschmann et al. is to teach it is known that it is necessary to keep fluid pressure within the wheel cylinders to maintain the vehicle in a stopped/parked condition when the engine is switched off. See the abstract of this reference. This means one of the electromagnetic valves controlling fluid flow between the master cylinder and the wheel cylinder(s) is shut off or closed. Although not applied see the patent to Hada et al. column 11 lines 20-30.

WO '282 is relied upon to show it is also notoriously well known to control the total biasing force(s) acting on the valve, and therefore the brake pressure levels in the wheel, by changing the level of the current applied to the coil.

It would have been obvious to have modified the device of Alaze et al., with the teachings of WO '282 and Buschmann et al., to control the opening and closing characteristics of the valve to predetermined braking design requirements.

Regarding claims 2,3 it is well known in the art to vary the forces acting on the valve, such as element 39 in Alaze et al., simply by varying the spring rate of the biasing spring 40 and level of current applied to the coil to desired design criteria of the brake system.

Regarding claim 8, as seen in Alaze et al., as modified, these requirements are met.

Regarding claims 11-17,19,20, as broadly claimed, the device of Alaze et al. is capable of functioning in the claimed manner, as modified above.

Regarding claim 22 these limitations are considered to be an obvious alternative equivalent to that shown by Alaze et al., as modified, in figure 2. Note the tapered shape of the valve seat. Applicants lack any criticality in the specification for the claimed limitations.

5. Claims 4-7,18,21,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alaze et al. modified above as applied to claim 1 above, and further in view of Akamatsu et al.

Regarding claim 4, to have modified the fixed and movable cores thereof in Alaze et al, as taught by Akamatsu et al. at in figure 2 at 41a and 43 would have been obvious to the ordinary skilled worker in the art for the reasons discussed in Akamatsu et al. in col. 6 lines 10-18.

Regarding claim 5, the valve at 18,53 of Alaze et al. is capable of functioning in the claimed manner. See figures 1 and 2.

Regarding claims 6 and 7 the limitations directed to the stepped shaped housing and conical shaped valve body and tube shaped communication passages, are notoriously well known in the art, are easily seen in the references cited, but not applied, and would merely amount to an obvious engineering choice of design given the strong similarity between Alaze et al. and applicant's application. Some of these features can

Art Unit: 3683

be readily seen in Akamatsu et al. Applicant lacks any criticality in the specification for these particular limitations.

Regarding claims 21,23 note that Akamatsu et al. does not use a spring between elements 41 and 52. Therefore such an arrangement would have amounted to an alternative equivalent arrangement to that of Alaze et al., possibly for increased responsiveness due to the lack of deformation of the spring.

6. Claims 1-3,8,9,14-17,19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 225731 in view of WO 95/19282 and Buschmann et al.

Regarding claims 1-3,8,9 due to the strong similarity between JP '731 and applicants design (as referenced in their specification) on page 1 the claimed features are believed to be readily apparent from the drawings of this reference.

WO '282 and Buschmann et al. are relied upon as previously indicated above.

7. Claims 4-7,10-13,18,21,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '731 as applied to claim 1 above, and further in view of Akamatsu et al..

Regarding claims 4-7,10-13,18,21,23 Akamatsu et al. is relied upon, as above, for a modification of the JP '731 reference.

Response to Arguments

8. Applicant's arguments filed 5/31/06 have been fully considered but they are not persuasive. Applicant's remarks concerning the added limitations to the independent claims are addressed in the action above. See the publication or patent to Hada et al.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

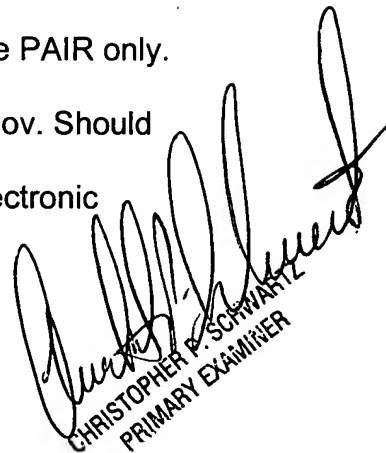
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/1/06



CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER